



Tobacco  
Institute  
Testing  
Laboratory

2 Taft Court  
Rockville,  
Maryland 20850  
(301) 294-8582

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Test # 4

Oct. 1989

Mr. Roy C. Hilliard  
Mr. William F. Kuhn  
Dr. Preston H. Leake  
Mr. Larry A. Lyerly  
Mr. James F. Nall  
Dr. Fred Schultz

Gentlemen:

Enclosed, as tables I through VI, are the means and standard deviations, where known, for "tar", nicotine, CO, TPM, water and puff count from the 4th interlab test carried out between October, 1989, and March, 1990.

For convenience, the results from the Phipps and Bird and Filtrona smoking machines at TITL were treated as if each came from a separate laboratory. The inclusion of Filtrona machine results, designated as TITL-Fil, does not change the grand mean for each sample, so there is no effect on any individual lab's regression line shown in figures 1 through 5.

As in previous reports, the graphs represent each laboratory as a regression line derived from each participant's sample "tar", nicotine, and CO average as a function of each sample's grand mean. Except for two figures, the ordering of the laboratories on the right side of the graph follows the sequence of the lines' right hand termination points. The tar and nicotine intercept regions are expanded in figures 2 and 4, and for these, the laboratory order is for the left hand termination points.

TITL's result, 17.4, for sample C7 smoked on the P&B machine is lower than the 18.1 value currently being obtained for this cigarette during market sample testing. The value for the Filtrona machine, 18.0, while slightly low, is not, statistically, different from its current machine average of 18.2.

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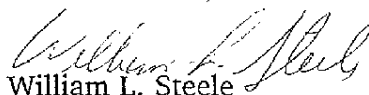
During the two week period in which the test was carried out, the value for the control monitor (Lorillard monitor, target tar value 12.5) was 12.5 for the study on the P&B machine and 12.5 on the Filtrona. Market sample runs done during the same period had control monitor values of 12.5 on the P&B and 12.7 on the Filtrona. The PM monitor, tested at the same time, gave values of 18.1 and 18.3 respectively. Overall, the control monitor is averaging 12.6 on the P&B with the PM monitor running 18.1, and is averaging 12.5 on the Filtrona with the PM monitor at 18.2.

The study runs were interspersed with market sample runs at varying times during the day. All technicians were assigned as equally as possible to each machine, and the assignments were distributed throughout the test period. The varieties were randomly arranged on the machines. All the usual precautions, in other words, were taken to minimize the effects of operator bias, short term fluctuations, and time of day.

PM monitors used for the study were selected from a new lot taken from a previously unopened box. But when the remaining sample was compared with the lot being used for the market sample, it did not show a marked difference in tar delivery. Furthermore, samples from the same case are now being used for the market sample test with no apparent difference in results. Butt length markings on the PM monitors used in the study and on those used for the market sample were also compared and found to be the same.

To date, no explanation for the apparently lower result has been found. Perhaps this type of occurrence is not peculiar to TITL, and with a common monitor coming into use throughout the industry, someone, somewhere, may make the observation needed to explain it.

Sincerely,

  
William L. Steele

Enclosure

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